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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,499	02/05/2002	Klaus Markhoff	MG-2036DIV.	7055

7590

12/31/2003

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EXAMINER

KENNY, STEPHEN

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 12/31/2003

615

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,499

Applicant(s)

MARKHOFF ET AL.

Examiner

Stephen J Kenny

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/403,359.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Windecker (US Patent No 4835975).

Regarding claim 21, Windecker discloses a process for producing a composite gas cylinder for a higher filling pressure comprising obtaining a pre-existing second-hand cylinder (column 2, lines 3-12 wherein the pre-stressed liner serves as a “second-hand cylinder”) for compressed, liquefied or dissolved gasses, with a lower filling pressure, and wrapping composite fibers over the pre-existing cylinder to convert the pre-existing cylinder into a inner liner and thereby form the composite gas cylinder from the inner liner and the outer composite fiber wrapping.

Regarding claim 22, Windecker discloses that the liner had been used as a pressurized gas cylinder (column 2, line 5) containing pressurized gasses (column 1, lines 58+).

Regarding claims 20 & 23, Windecker discloses at least 85% of the pressure resistance is from the liner (column 2, lines 5-6 wherein all the pressure resistance or 100%, is provided by the liner since the composite windings are not yet applied).

Regarding claim 18, Windecker discloses that the liner is made of aluminum (column 1, line 61) and is vacuum tight (which is an inherent feature of a pressure vessel, if it were not

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vacuum tight it would not be able to maintain the gas under pressure, i.e. a leak would be formed).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Windecker in view of Hext (US Patent No 4486938).

Windecker discloses the claimed invention except for machining of the pre-existing cylinder/liner to reduce its wall thickness.

Hext discloses machining of a pre-existing liner to reduce its wall thickness (column 4, lines 50-58). The machining of the liners to reduce the wall thickness allows for the liner to be reused in another application thus resulting in a prolonged service life and cost savings.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a pressure cylinder as discloses by Windecker by machining a pre-existing liner to reduce its wall thickness, as taught by Hext, in order to realize the advantages discussed above.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Windecker in view of Applicant's Admitted Prior Art (AAPA).

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Regarding claims 13-17 Windecker discloses the claimed invention except for the pre-existing cylinder having a filling pressure of 150-200 bar; and the higher filling pressure of the finished composite cylinder is 300 bar.

AAPA discloses a pre-existing cylinder at a pressure of 150-200 bar (page 2, line 3) & the higher filling pressure of a composite cylinder is 300 bar (page 2, line 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to fill the pre-existing cylinder of Windecker to the pressures specified by AAPA to thereby effectively plastically deform the pre-existing cylinder as required by Windecker (by providing a filling pressure of 150-200 bar), and to provide the finished composite cylinder (having the 150-200 bar fill pressure) which would allow the composite cylinder to be employed in a wide range of applications.

Response to Arguments

Applicant's arguments with respect to claims 11-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

sk SK
12/18/03



DAVID P. BRYANT
PRIMARY EXAMINER